## **AMENDMENTS TO THE CLAIMS**

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- 1. (Original) Organic electroluminescent device comprising anode, cathode and at least one emission layer comprising at least one matrix material A which is doped with at least one phosphorescent emitter, and at least one hole-blocking layer comprising at least one hole-blocking material B, characterised in that the hole-blocking material B contains at least one chemical structural unit of the formula Y=X, where X has at least one non-bonding electron pair and where the radical X stands for NR, O, S, Se or Te, and R stands for an organic radical having 1 to 22 carbon atoms or for OH, OR, NH<sub>2</sub>, NHR<sup>6</sup> or N(R<sup>6</sup>)<sub>2</sub>, where R<sup>6</sup> = H or an organic radical having 1 to 20 C atoms, and where the radical Y stands for C, P, As, Sb, Bi, S, Se or Te, with the proviso that the matrix material A is not identical with the hole-blocking material B.
- 2. (Original) Organic electroluminescent device according to Claim 1, characterised in that it comprises a hole-blocking material B conforming to the formulae (1) to (4) according to scheme 1

Scheme 1

where the symbols used have the following meaning:

- Y is, identically or differently on each occurrence, C in the formula (2) and P, As, Sb or Bi in the formulae (1) and (3) and S, Se or Te in the formulae (2) and (4);
- X is on each occurrence, identically or differently, NR<sup>4</sup>, O, S, Se or Te;
- R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> is, identically or differently on each occurrence, H, F, CN, N(R<sup>4</sup>)<sub>2</sub>, a straightchain, branched or cyclic alkyl, alkoxy or thioalkoxy group having 1 to 40 C

or  $N(R^5)_2$ ;

atoms, which may be substituted by R<sup>5</sup> or also unsubstituted, in which one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>6</sup>C=CR<sup>6</sup>-, -C=C-, Si(R<sup>6</sup>)<sub>2</sub>, Ge(R<sup>6</sup>)<sub>2</sub>, Sn(R<sup>6</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>6</sup>, -O-, -S-, -NR<sup>6</sup>- or -CONR<sup>6</sup>- and in which one or more H atoms may be replaced by F, Cl, Br, I, CN or NO<sub>2</sub>, or an aromatic or heteroaromatic ring system or an aryloxy or heteroaryloxy group having 1 to 40 aromatic C atoms, which may be substituted by one or more radicals R<sup>5</sup>; a plurality of substituents R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> here may form a mono- or polycyclic, aliphatic or aromatic ring system with one another; or an aromatic or heteroaromatic ring system bonded via a divalent group -Z-, or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R<sup>4</sup>, where a plurality of substituents R<sup>4</sup> may define a

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is on each occurrence, identically or differently, a straight-chain, branched or cyclic alkyl or alkoxy chain having 1 to 22 C atoms, in which, in addition, one or more non-adjacent C atoms may be replaced by -R<sup>6</sup>C=CR<sup>6</sup>-, -C≡C-, Si(R<sup>6</sup>)<sub>2</sub>, Ge(R<sup>6</sup>)<sub>2</sub>, Sn(R<sup>6</sup>)<sub>2</sub>, -NR<sup>6</sup>-, -O-, -S-, -CO-O- or -O-CO-O- and in which one or more H atoms may be replaced by fluorine, an aryl, heteroaryl or aryloxy group having 1 to 40 C atoms, which may also be substituted by one or more radicals R<sup>6</sup>, or OH

further mono- or polycyclic, aliphatic or aromatic ring system;

is on each occurrence, identically or differently, R<sup>4</sup> or CN, B(R<sup>6</sup>)<sub>2</sub> or Si(R<sup>6</sup>)<sub>3</sub>;

is on each occurrence, identically or differently, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms;

is a straight-chain, branched or cyclic, preferably conjugated radical having 1 to 40 C atoms, which is preferably conjugated with the two other substituents, where the number of atoms of Z which link the group of the formula (1) and the aromatic radical is preferably an even number, where one or more non-adjacent C

 $R^5$ 

 $R^6$ 

Z

atoms may be replaced by -O-, -S- or -NR<sup>1</sup>- and one or more C atoms may be substituted by a radical R<sup>1</sup> or halogen;

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and with the proviso that the molecular weight of the hole-blocking material B is greater than 150 g/mol.

- 3. (Currently amended) Organic electroluminescent device according to <u>claim 2 Claim 1</u> and/or 2, characterised in that Y = C, P or S, and X = O.
- 4. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 3 claim 1, characterised in that the hole-blocking layer comprises at least 50% of the hole-blocking material B.
- 5. (Original) Organic electroluminescent device according to Claim 4, characterised in that the hole-blocking layer consists only of the hole-blocking material B.
- 6. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 5 claim 1, characterised in that the compounds of the hole-blocking material B do not have a planar structure.
- 7. (Currently amended) Organic electroluminescent device according to one or more of Claims 1-to 6 claim 2 characterised in that at least one of the substituents R<sup>1</sup> to R<sup>4</sup> in the hole-blocking material B contains at least one sp<sup>3</sup>-hybridised carbon atom.
- 8. (Original) Organic electroluminescent device according to Claim 7, characterised in that the sp<sup>3</sup>-hybridised carbon atom is a secondary, tertiary or quaternary carbon atom.
- 9. (Original) Organic electroluminescent device according to Claim 8, characterised in that the sp<sup>3</sup>-hybridised carbon atom is a quaternary carbon atom.
- 10. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 9 claim 2, characterised in that a 9,9'-spirobifluorene derivative, a 9,9-disubstituted fluorene derivative, an indenofluorene derivative, a triptycene derivative, 9,10-

dihydrophenanthrene derivative, a hexaarylbenzene derivative or a tetraarylmethane derivative is present in at least one of the radicals R<sup>1</sup> to R<sup>4</sup>.

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- 11. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 10 claim 2, characterised in that a 9,9'-spirobifluorene derivative or a 9,9-disubstituted fluorene is present in at least one of the radicals R<sup>1</sup> to R<sup>4</sup>.
- 12. (Currently amended) Organic electroluminescent device according to one or more of Claims 1-to 11 claim 1, characterised in that the matrix materials A are selected from the group of carbazoles, silanes, polypodal metal complexes, oligophenylenes based on spirobifluorenes, ketones, imines, phosphine oxides, phosphine sulfides, phosphine selenides, phosphazenes, sulfones and sulfoxides.
- 13. (Currently amended) Organic electroluminescent device according to one or more of Claims 1-to 12 claim 1, characterised in that the hole-blocking layer is directly adjacent to the electron-injection layer or cathode.
- 14. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 13 claim 1, characterised in that the phosphorescent emitter present is a compound which contains at least one atom having an atomic number of greater than 36 and less than 84.
- 15. (Original) Organic electroluminescent device according to Claim 14, characterised in that the phosphorescent emitter contains at least one atom having an atomic number of greater than 56 and less than 80.
- 16. (Currently amended) Organic electroluminescent device according to Claim 14 and/or 15, characterised in that the phosphorescent emitter contains molybdenum, tungsten, rhenium, ruthenium, osmium, rhodium, iridium, palladium, platinum, silver, gold and/or europium.
- 17. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 16 claim 1, characterised in that the glass transition temperature T<sub>g</sub> of the hole-blocking material B is greater than 100°C.

18. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 17 claim 1, characterised in that one or more layers are produced by a sublimation process.

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- 19. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 17 claim 1, characterised in that one or more layers are applied by the OVPD (organic vapour phase deposition) process.
- 20. (Currently amended) Organic electroluminescent device according to one or more of Claims 1 to 17 claim 1, characterised in that one or more layers are coated by a printing process.
- 21. (Original) Organic electroluminescent device according to Claim 20, characterised in that one or more layers are coated by the ink-jet printing process.
- 22. (Original) Organic electroluminescent device according to Claim 20, characterised in that one or more layers are coated by the LITI (light induced thermal imaging) process.
- 23. cancelled
- 24. (Currently amended) Organic solar cell, organic field-effect transistor, organic thin-film transistor, organic integrated circuit or organic laser diode, characterised in that the structure complies with one or more of Claims 1 to 22.
- 25. (New) The organic electroluminescent device as claimed in claim 2, wherein Y=X, where X has at least one non-bonding electron pair and where the radical X stands for NR, O, S, Se or Te and R stands for an organic radical having 1 to 22 carbon atoms or for OH, OR, NH<sub>2</sub>, NHR<sup>6</sup> or N(R<sup>6</sup>)<sub>2</sub>, where R<sup>6</sup> = H or an organic radical having 1 to 20 C atoms, and where the radical Y stands for C, P, As, Sb, Bi, S, Se or Te,
- 26. (New) A hole-blocking material in an electronic component which comprises the device as claimed in claim 25.

27. (New) An organic light-emitting diode, organic solar cell, organic field-effect transistor, organic thin-film transistor, organic integrated circuit or organic laser diode which comprises the hole-blocking material as claimed in claim 26.

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